

**IN THE CLAIMS:**

- 1 1. (Currently Amended): A method of ~~building attempting to build~~ credentials for a  
2 user of a device connected to a network, the method comprising ~~the steps of~~:  
3       providing, ~~a plurality of credential descriptors~~ to a first credential builder  
4 included in a first device connected to the network, a credential descriptor that  
5 describes a plurality of credentials;  
6       using the first credential builder to attempting to build credentials  
7 ~~corresponding to~~ at least one of the credentials described by the credential descriptors  
8 ~~using the first credential builder~~;  
9       providing ~~at least one~~ a credential descriptor that describes at least one for  
10 ~~which a corresponding credential was not built in by the first credential builder~~ the  
11 ~~first building step~~ to a second credential builder included in a second device  
12 connected to the network; and  
13       using the second credential builder to attempting to build credentials  
14 ~~corresponding to~~ at least one credential described by the ~~of the~~ credential  
15 ~~descriptor~~ descriptors provided in the second providing step using the second  
16 ~~credential builder to the second credential builder.~~
- 1 2. (Currently Amended): The method of claim 1 further including ~~the steps of~~:  
2       providing the credentials built using the first and second credential builders to  
3 a credential evaluator included in the first device or the second device; and  
4       evaluating the built credentials by using the credential evaluator to determine  
5 whether the built credentials satisfy the ~~plurality of credential descriptors~~ descriptor  
6 for the device.

1 3. (Currently Amended): The method of claim 1 further including ~~the steps of:~~  
2 providing the credentials built using the first and second credential builders to  
3 a credential evaluator included in a device connected to the network that is different  
4 from the first and second devices; and  
5 evaluating the built credentials by using the credential evaluator to determine  
6 whether the built credentials satisfy the ~~plurality of credential descriptors~~ descriptor  
7 for the device.

1 4. (Currently Amended): The method of claim 1 further including ~~the steps of:~~  
2 providing ~~at least one~~ a credential descriptor that describes at least one for  
3 ~~which a corresponding credential was not built in the second building step to the first~~  
4 credential builder; and  
5 attempting to build credentials corresponding thereto by using the first  
6 credential builder.

1 5. (Currently Amended): The method of claim 1 further including ~~the steps of:~~  
2 providing ~~at least one~~ a credential descriptor that describes at least one for  
3 ~~which a corresponding credential was not built in~~ by using either the first or the  
4 second ~~building step~~ credential builder to a third credential builder included in a  
5 device connected to the network that is different from the first and second devices;  
6 and  
7 using the third credential builder to attempting to build at least one  
8 credentialerentials described by the credential descriptor provided to corresponding  
9 ~~thereto using~~ the third credential builder.

1 6. (Currently Amended): The method of claim 1 further including ~~the step of~~  
2 generating the ~~plurality of credential descriptors~~ descriptor for the device.

1 7. (Currently Amended): A system used to attempt to build credentials for a user of  
2 a device connected to a network, comprising:

3 a first credential builder operative to build credentials described by  
4 ~~corresponding to at least one of a plurality of a~~ credential descriptor~~descriptors~~ for the  
5 device; and

6 a second credential builder operative to build ~~credentials corresponding to at~~  
7 least another one of the ~~plurality of~~ credentials described by the credential descriptors  
8 for the device,

9 wherein the first credential builder and the second credential builder are  
10 included in different devices connected to the network.

1 8. (Original): The system of claim 7 further including a master credential evaluator  
2 operative to evaluate credentials built by the first and second credential builders.

1 9. (Original): The system of claim 8 wherein the credential evaluator is included in  
2 the same device as the first credential builder or the second credential builder.

1 10. (Currently Amended): The system of claim 8 wherein the credential evaluator is  
2 included in a device different from the first and second ~~devices including the first and~~  
3 ~~second credential builders.~~

1 11. (Currently Amended): A method of building attempting to build credentials for  
2 a user of a device, the method comprising ~~the steps of:~~

3 providing a master ~~plurality of~~ credential ~~descriptors~~ descriptor to a master  
4 credential builder that includes a plurality of credential builders, ~~for building a~~  
5 ~~corresponding plurality of different types of credentials for the device~~ each of which:

6 A) is associated with a respective credential type;

- 7           B) takes an input that includes an input set of zero or more  
8           credentials and an input credential descriptor that describes at  
9           least one credential to be built;  
10          C) attempts to build a given credential described by the credential  
11          builder if the given credential is of the credential type associated  
12          with that credential builder; and  
13          D) generates an output that includes:  
14             i) an output set of credentials that includes the input set of  
15             credentials as well as any credential that that credential  
16             builder has been successful in building; and  
17             ii) an output credential descriptor that describes each  
18             credential described by the input credential descriptor  
19             that that credential builder has not been successful in  
20             building,  
21          the credential builders being linked in a series in such a manner that the input  
22          credential descriptor and set of credentials of each credential builder but the first  
23          credential builder in the series include the output credential descriptor and set of  
24          credentials of the preceding credential builder; and  
25          employing the master credential builder to attempting to build at least one  
26          credential described by corresponding to at least one of the master  
27          credential descriptors descriptor using the master credential builder.

1   12. (Currently Amended): The method of claim 11 wherein, if the master  
2   credential builder has built credentials as a result of having attempted to build  
3   credentials, the method further including include the steps of:

4       providing the credentials built by using the master credential builder to a  
5   master credential evaluator that includes a plurality of credential evaluators for  
6   evaluating a corresponding plurality of different types of credentials for the  
7   device; and

8 using the master credential evaluator to ~~evaluating~~ evaluate the built  
9 credentials provided thereto by using the master credential evaluator to determine  
10 whether the ~~those~~ built credentials satisfy the plurality of credential descriptors  
11 descriptor for the device.

1 13. (Currently Amended): The method of claim 11 further including ~~the step of~~  
2 generating the ~~plurality of credential descriptors~~ descriptor for the device.

1 14. (Currently Amended): Apparatus used to attempt to build credentials for a user  
2 of a device, comprising[[:]]  
3 a master credential builder for building credentials described by ~~corresponding to at~~  
4 least one of a plurality of credential descriptors descriptor for the device, the master  
5 credential builder including a plurality of credential builders, each of which:

6 A) is associated with a respective credential type;

7 B) takes an input that includes an input set of zero or more credentials and  
8 an input credential descriptor that describes at least one credential to be  
9 built;

10 C) attempts to build a given credential described by the credential builder  
11 if the given credential is of the credential type associated with that  
12 credential builder; and

13 D) generates an output that includes:

14 i) an output set of credentials that includes the input set of  
15 credentials as well as any credential that that credential builder  
16 has been successful in building; and

17 ii) an output credential descriptor that describes each credential  
18 described by the input credential descriptor that that credential  
19 builder has not been successful in building,

20 the credential builders being linked in a series in such a manner that the input  
21 credential descriptor and set of credentials of each credential builder but the first

22 credential builder in the series include the output credential descriptor and set of  
23 credentials of the preceding credential builder~~operative to build a credential of a~~  
24 ~~different type for the device.~~

1 15. (Currently Amended): The apparatus of claim 14 further including a master  
2 credential evaluator for, if the master credential builder has built credentials as a  
3 result of having attempted to build credentials, evaluating the credentials built by the  
4 master credential builder to determine whether the ~~built credentials~~ built by the  
5 master credential builder satisfy the ~~plurality of credential descriptors~~ descriptor for  
6 the device, the master credential evaluator including a plurality of credential  
7 evaluators operative to evaluate a corresponding plurality of different types of  
8 credentials for the device.

1 16. (Currently Amended): The apparatus of claim 14 further including a credential  
2 descriptor generator for generating the ~~plurality of credential descriptors~~ descriptor  
3 for the device.

1 17. (Currently Amended): A method of ~~building attempting to build~~ building credentials for  
2 a user of a device, the method comprising ~~the steps of:~~  
3 providing a ~~plurality of credential descriptors~~ descriptor to a master credential  
4 builder, the master credential builder including at least one credential builder that:  
5 A) is associated with a respective credential type;  
6 B) takes an input that includes an input set of zero or more credentials and  
7 an input credential descriptor that describes at least one credential to be  
8 built;  
9 C) attempts to build a given credential described by the credential builder  
10 if the given credential is of the credential type associated with that  
11 credential builder; and

12       D) generates an output that includes:

13               i) an output set of credentials that includes the input set of  
14               credentials as well as any credential that that credential builder  
15               has been successful in building; and

16               ii) an output credential descriptor that describes each credential  
17               described by the input credential descriptor that that credential  
18               builder has not been successful in building;

19       adding at least one different credential builder to the master credential builder  
20       to form a modified master credential builder in such a manner that the credential  
21       builders are so linked in a series that the input credential descriptor and set of  
22       credentials of each credential builder but the first credential builder in the series  
23       include the output credential descriptor and set of credentials of the preceding  
24       credential builder; and

25       using the modified master credential builder to ~~attempting attempt~~ to build  
26       credentials corresponding to at least one of the plurality of credential descriptors  
27       using the modified master credential builder.

1       18. (Currently Amended): The method of claim 17 further including ~~the steps of:~~  
2       providing the ~~different~~ credentials built by the modified master credential  
3       builder to a master credential evaluator;

4       forming a modified master credential evaluator by adding to the master  
5       credential evaluator different credential evaluators corresponding to at least a portion  
6       of the ~~different~~ credentials provided to the master credential evaluator to the master  
7       credential evaluator to form a modified master credential evaluator; and

8       evaluating the credentials corresponding to at least one of the ~~credentials~~  
9       credential evaluators by using the modified master credential evaluator.

1 19. (Currently Amended): The method of claim 18 further including ~~the step~~  
2 ~~of removing~~ credential evaluators that do not correspond to at least one of the  
3 credentials from the master credential evaluator.

1 20. (Currently Amended): The method of claim 17 further including ~~the step of~~  
2 generating the ~~plurality of different credential descriptors~~ descriptor for the device.

1 21. (Currently Amended): A method of ~~building attempting to build~~ credentials for  
2 a user of a device, the method comprising ~~the steps of~~:  
3 providing a ~~plurality of credential descriptors~~ descriptor to a master credential  
4 builder, the master credential builder including a plurality of credential builders, each  
5 of which:

6 A) is associated with a respective credential type;

7 B) takes an input that includes an input set of zero or more credentials and  
8 an input credential descriptor that describes at least one credential to be  
9 built;

10 C) attempts to build a given credential described by the credential builder  
11 if the given credential is of the credential type associated with that  
12 credential builder; and

13 D) generates an output that includes:

14 i) an output set of credentials that includes the input set of  
15 credentials as well as any credential that that credential builder  
16 has been successful in building; and

17 ii) an output credential descriptor that describes each credential  
18 described by the input credential descriptor that that credential  
19 builder has not been successful in building,

20 the credential builders being linked in a series in such a manner that the input  
21 credential descriptor and set of credentials of each credential builder but the first



credential builder in the series include the output credential descriptor and set of  
credentials of the preceding credential builder;

removing at least one of the credential builders from the master credential  
builder to form a modified master credential builder; and

using the modified master credential builder to attempting attempt to build  
credentials corresponding to at least one of the credentials described by the credential  
descriptors-descriptor using the modified master credential builder.

22. (Currently Amended): Apparatus used to attempt to build credentials for a user  
of a device, comprising:

a master credential builder including a plurality of credential , each of which:

A) is associated with a respective credential type;

B) takes an input that includes an input set of zero or more credentials and  
an input credential descriptor that describes at least one credential to be  
built;

C) attempts to build a given credential described by the credential builder  
if the given credential is of the credential type associated with that  
credential builder; and

D) generates an output that includes:

i) an output set of credentials that includes the input set of  
credentials as well as any credential that that credential builder  
has been successful in building; and

ii) an output credential descriptor that describes each credential  
described by the input credential descriptor that that credential  
builder has not been successful in building,

the credential builders being linked in a series in such a manner that the input  
credential descriptor and set of credentials of each credential builder but the first  
credential builder in the series include the output credential descriptor and set of  
credentials of the preceding credential builderbuilders operative to build credentials

22 ~~corresponding to at least one of a plurality of credential descriptors for the device;~~  
23 and

24 at least one processor operative to execute first program code to remove at  
25 least one credential builder from the master credential builder in response to a  
26 first event, and second program code to add at least one credential builder to the  
27 master credential builder in response to a second event.

1 23. (Original): The apparatus of claim 22 further including a master credential  
2 evaluator including a plurality of credential evaluators operative to evaluate  
3 credentials built by the master credential builder, the at least one processor being  
4 operative to execute third program code to remove at least one credential evaluator  
5 from the master credential evaluator in response to a third event, and operative to  
6 execute fourth program code to add at least one credential evaluator to the master  
7 credential evaluator in response to a fourth event.

1 24. (Currently Amended): The apparatus of claim 22 further including a credential  
2 descriptor generator for generating the ~~plurality of credential descriptors~~ descriptor  
3 for the device.

1 25. (Currently Amended): A method of ~~building attempting to build~~ building credentials for  
2 a user of a device, the method comprising the steps of:

3 providing a master credential builder having ~~a~~ at least one credential builder  
4 builder that:

5 A) is associated with a first type of credential;

6 B) takes an input that includes an input set of zero or more credentials and  
7 an input credential descriptor that describes at least one credential to be  
8 built;

9           C) attempts to build a given credential described by the credential builder  
10           if the given credential is of the type of credential associated with that  
11           credential builder; and  
12           D) generates an output that includes:  
13           i) an output set of credentials that includes the input set of  
14           credentials as well as any credential that that credential builder  
15           has been successful in building; and  
16           ii) an output credential descriptor that describes each credential  
17           described by the input credential descriptor that that credential  
18           builder has not been successful in building; and  
19           ~~for building a first type of credential;~~  
20           in response to a predetermined event, forming a modified master credential  
21 builder by adding an additional credential builder to the master credential builder an  
22 additional credential builder, associated with for building a type of credential  
23 different from the first type of credential, in such a manner that the credential  
24 builders are so linked in a series that the input credential descriptor and set of  
25 credentials of each credential builder but the first credential builder in the series  
26 include the output credential descriptor and set of credentials of the preceding  
27 credential builderto form a modified master credential builder; and  
28           attempting to build at least one credential by using the modified master  
29           credential builder.

1   26. (Currently Amended): Apparatus used to attempt to build credentials for a  
2   user of a device, comprising:  
3       a master credential builder, having a credential builder that:  
4       A) is associated with a first type of credential;  
5       B) takes an input that includes an input set of zero or more credentials and  
6       an input credential descriptor that describes at least one credential to be  
7       built;

8           C) attempts to build a given credential described by the credential builder  
9           if the given credential is of the credential type associated with that  
10          credential builder; and  
11          D) generates an output that includes:  
12            i) an output set of credentials that includes the input set of  
13            credentials as well as any credential that that credential builder  
14            has been successful in building; and  
15            ii) an output credential descriptor that describes each credential  
16            described by the input credential descriptor that that credential  
17            builder has not been successful in building-operative to build a  
18            first type of credential; and  
19          a processor operative, in response to a predetermined event, to execute  
20          program code to add at least one credential builder to the master credential builder  
21          in such a manner that the credential builders are so linked in a series that the input  
22          credential descriptor and set of credentials of each credential builder but the first  
23          credential builder in the series include the output credential descriptor and set of  
24          credentials of the preceding credential builder-in response to a predetermined  
25          event, the at least one added credential builder being operative to build a type of  
26          credential different from the first type of credential.

1   27.   (Canceled)

1   28.   (Canceled)

1   29.   (Canceled)

1   30.   (Canceled)

1 31. (Currently Amended): Apparatus used to attempt to build credentials for a user  
2 of a device connected to a network, comprising:

3 means for generating for the device a ~~plurality of~~ credential  
4 ~~descriptors~~ descriptor that describes a plurality of credentials ~~for the device~~;

5 means for providing the credential ~~descriptors~~ descriptor to a first credential  
6 builder;

7 means for using the first credential builder to building at least one of the  
8 ~~credentials corresponding to at least one of~~ described by the credential  
9 ~~descriptor~~ descriptors using the first credential builder;

10 means for providing to a second credential builder at least one a credential  
11 ~~descriptor that describes at least one for which a corresponding~~ credential was not  
12 built in the first building step ~~to a second credential builder~~; and

13 means for using the second credential builder to building credentials  
14 ~~corresponding to at least one credential described by~~ of the credential descriptors  
15 descriptor provided in to the second providing step ~~credential builder using the second~~  
16 ~~credential builder~~;

17 wherein the first credential builder and the second credential builder are  
18 included in different devices connected to the network.

1 32. (Currently Amended): A method of evaluating credentials for a user of a  
2 device, comprising ~~the steps of~~:

3 providing a ~~master~~ plurality of credential ~~descriptors~~ descriptor and a plurality  
4 of credentials for the device to a master credential evaluator including a plurality of  
5 credential evaluators, each of which:

6 A) is associated with a respective credential type;

7 B) takes an input that includes an input set of at least one credential and an  
8 input credential descriptor that describes at least one credential to be  
9 evaluated;

10       C) attempts to evaluate a given credential in the input set if the given  
11       credential is described by the credential descriptor and is of the  
12       credential type associated with that credential evaluator; and  
13       D) generates an output that includes the input set of credentials and an  
14       output credential descriptor that describes each credential that is  
15       described by the input credential descriptor but has not successfully  
16       been evaluated by that credential evaluator,  
17       the credential evaluators being linked in a series in such a manner that the input  
18       credential descriptor and set of credentials of each credential evaluator but the first  
19       credential evaluator in the series include the output credential descriptor and set of  
20       credentials of the preceding credential evaluator for evaluating a corresponding  
21       plurality of different types of credentials; and  
22       evaluating the plurality of credentials by using the master credential evaluator  
23       to determine whether the plurality of credentials satisfies the plurality of master  
24       credential descriptorsdescriptor.

1       33. (Currently Amended): A method of evaluating credentials for a user of a  
2       device, comprising the steps of:  
3       providing a master plurality of credential descriptorsdescriptor and a plurality  
4       of credentials for the device to a master credential evaluator including at least one  
5       credential evaluator, each of which:  
6       A) is associated with a respective credential type;  
7       B) takes an input that includes an input set of at least one credential and an  
8       input credential descriptor that describes at least one credential to be  
9       evaluated;  
10       C) attempts to evaluate a given credential in the input set if the given  
11       credential is described by the credential descriptor and is of the  
12       credential type associated with that credential evaluator; and

13        D) generates an output that includes the input set of credentials and an  
14        output credential descriptor that describes each credential that is  
15        described by the input credential descriptor but has not successfully  
16        been evaluated by that credential evaluator;  
17        forming a modified credential evaluator by adding at least one credential  
18        evaluator to the master credential evaluator in such a manner that the credential  
19        evaluators are so linked in a series that the input credential descriptor and set of  
20        credentials of each credential evaluator but the first credential evaluator in the series  
21        include the output credential descriptor and set of credentials of the preceding  
22        credential evaluator to form a modified master credential evaluator; and  
23        evaluating at least one of the credentials by using the modified master  
24        credential evaluator to determine whether the at least one credential satisfies ~~at least~~  
25        ~~one of the master plurality of credential descriptors~~ descriptor.

1        34. (Currently Amended): A method of evaluating credentials for a user of a device,  
2        comprising the steps of:

3        providing a ~~plurality of master credential descriptors~~ descriptor and a plurality of  
4        credentials for the device to a master credential evaluator including a plurality of credential  
5        evaluators, each of which:

6        A) is associated with a respective credential type;

7        B) takes an input that includes an input set of at least one credential and an  
8        input credential descriptor that describes at least one credential to be  
9        evaluated;

10       C) attempts to evaluate a given credential in the input set if the given  
11       credential is described by the credential descriptor and is of the  
12       credential type associated with that credential evaluator; and

13       D) generates an output that includes the input set of credentials and an  
14       output credential descriptor that describes each credential that is

15 described by the input credential descriptor but has not successfully  
16 been evaluated by that credential evaluator,  
17 the credential evaluators being linked in a series in such a manner that the input  
18 credential descriptor and set of credentials of each credential evaluator but the first  
19 credential evaluator in the series include the output credential descriptor and set of  
20 credentials of the preceding credential evaluator;

21 removing at least one of the credential evaluators from the master credential  
22 evaluator to form a modified master credential evaluator; and

23 evaluating at least one of the credentials by using the modified master credential  
24 evaluator to determine whether the at least one credential satisfies ~~at least one of the~~  
25 ~~plurality of~~ master credential descriptors.

1 35. (Currently Amended): A method of evaluating credentials for a user of a device,  
2 comprising the steps of:

3 providing a master credential evaluator having a credential evaluator that:

4 A) is associated with a first type of credential;

5 B) takes an input that includes an input set of at least one credential and an  
6 input credential descriptor that describes at least one credential to be  
7 evaluated;

8 C) attempts to evaluate a given credential in the input set if the given  
9 credential is described by the credential descriptor and is of the  
10 credential type associated with that credential evaluator; and

11 D) generates an output that includes the input set of credentials and an  
12 output credential descriptor that describes each credential that is described by  
13 the input credential descriptor but has not successfully been evaluated by that  
14 credential evaluator ~~for evaluating a first type of credential;~~

15 in response to a predetermined event, adding to the master credential evaluator an  
16 additional credential evaluator, the credential evaluators being linked in a series in such  
17 a manner that the input credential descriptor and set of credentials of each credential



18 evaluator but the first credential evaluator in the series include the output credential  
19 descriptor and set of credentials of the preceding credential evaluator, the additional  
20 credential evaluator being associated with~~for evaluating~~ a type of credential different  
21 from the first type of credential ~~to the master credential evaluator~~; and  
22 evaluating at least one credential using the master credential evaluator.